SAFETY DATA SHEET

Product Name: BOSS ® Pour-On for Cattle

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND SUPPLIER

Product name:	BOSS ® Pour-On for Cattle
Recommended use:	A topical veterinary medicine for the control and treatment of internal and external parasites of livestock.
Company name:	Alleva Animal Health Limited
Address:	1/116a Harris Road, East Tamaki, Auckland, 2013, New Zealand
Telephone:	0064-9-4181405
Emergency telephone number:	National Poisons Centre: 0800 764 766 (0800 POISON) Fire Service, Ambulance: Dial 111
Restrictions of Use	Refer to Section 15
Date of SDS Preparation	27 February 2025 v3

SECTION 2: HAZARDS IDENTIFICATION

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: Veterinary Medicines (Non-Dispersive Open System Application) – HSR100759

Pictograms

Signal Word: **DANGER**

GHS Classification and Category	Hazard Code	Hazard Statement
Acute oral toxicity Cat. 4	H302	Harmful if swallowed.
Eye irritation Cat. 2	H319	Causes serious eye irritation.
Skin sensitisation Cat. 1	H317	May cause an allergic skin reaction.
Germ cell mutagenicity Cat. 2	H341	Suspected of causing genetic defects.

Reproductive toxicity Cat. 2	H361	Suspected of damaging fertility or the unborn child.
Effects on or via lactation	H362	May cause harm to breast-fed children.
Specific target organ toxicity – repeated exposure Cat. 1	H372	Causes damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment acute/chronic Cat. 1	H400/410	Very toxic to aquatic life with long lasting effects.
Hazardous to soil organisms	H423	Hazardous to soil organisms
Hazardous to terrestrial vertebrates	H432	Hazardous to terrestrial vertebrates
Hazardous to terrestrial invertebrates	H441	Hazardous to terrestrial invertebrates

Prevention Code	**Prevention Statement**
P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe fumes, vapours, spray.
P263	Avoid contact during pregnancy/while nursing.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.
P281	Use personal protective equipment as required.

Response Code	**Response Statement**
P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

SECTION 3: COMPOSITION

Product form:	Liquid	
Product Components:		
Name	**CAS**	**Proportion**
Abamectin	71751-41-2	1% w/v
Levamisole Base	14769-73-4	20% w/w
Butylated hydroxytoluene	128-37-0	<0.1 w/w
2-(2-butoxyethoxy)ethanol	112-34-5	>20% w/v

SECTION 4: FIRST AID MEASURES

Necessary first aid measures:	**General Information:** Remove victim from contaminated area. If there is a risk of unconsciousness, position and transport in a stable lateral position. Take container/label or MSDS for identification. **Skin Contact:** Immediately remove all contaminated clothing, including footwear. Wash with water for 15 minutes. Seek medical attention if irritation persists. **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. **Ingestion:** Rinse mouth with water. Seek immediate medical assistance. DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell. **Inhalation:** Remove patient to fresh air, avoid breathing vapours yourself. If not breathing apply resuscitation. Seek medical assistance.

Most important symptoms and effects, both acute and delayed	Symptoms: Harmful if swallowed. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of causing genetic defects. Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children. Causes damage to organs through prolonged or repeated exposure.
Notes for medical personnel:	There is no specific antidote. Apply symptomatic therapy.

SECTION 5: FIRE FIGHTING MEASURES

Type of hazard:	Non-flammable, combustible, non-explosive
Fire hazard properties:	Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.
Extinguishing media and methods:	Sprayed water jet, foam, dry chemical powder CO2 and sand. Do not allow water to enter drains.
Hazchem code:	**3Z**
Recommended protective clothing:	Fire fighters should wear self-contained breathing apparatus in enclosed areas. Fight fire in the early stages if it is safe to do so.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear suitable protective clothing. Restrict access to contaminated area.
Environmental Precautions:	Contain the spill and prevent further dispersion. Prevent contamination of water courses and sewers.
Procedure for Spills:	Retrieve intact containers from the site. Place damaged containers into containment devices. Absorb spills with inert material and place in waste containers. Wash the area with water and absorb further inert material. Collect spilled material and place in sealable containers for subsequent disposal.

Procedure for Disposal:	Contaminated material must be disposed of at an approved landfill or other approved facility in accordance with local, regional and national requirements. Avoid contamination of any water supply with product or empty container.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	• Read label before use. • Obtain special instructions before use. • Do not handle until all safety precautions have been read and understood. • Apply with well-maintained and calibrated equipment. • Do not breathe fumes, vapours, spray. • Avoid contact during pregnancy/while nursing. • Wash hands thoroughly after handling. • Do not eat, drink or smoke when using this product. • Contaminated work clothing should not be allowed out of the workplace. • Avoid release to the environment. • Wear protective clothing as detailed in Section 8. • Use personal protective equipment as required.
Conditions for safe storage:	• Store in a cool and dry environment. • Keep out of reach of children. • Keep locked away so that unauthorised persons do not have access. • Keep away from food, drink and animal feeding stuffs. • Store away from sources of ignition. • Store away from incompatible materials listed in Section 10.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³
Butylated hydroxytoluene [128-37-0]	-	10	-	-

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices Feb 2025 15TH EDITION.

Engineering controls:	Use in well ventilated area
Personal protection: 	**Respiratory protection:** Not required. **Hand protection:** Protective gloves for chemical use including nitriles. **Eye protection:** Safety chemical goggles should be worn. **Hygiene procedures:** Keep the place of work clean. Avoid contact with product. Keep working clothes separate. Change badly soiled or soaked clothing. Wash hand before breaks and at the end of work. Remove contaminated protective clothing. Keep away from food stuffs, drinks and tobacco.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear pale yellow to yellow solution
Odour	Mild odour
Odour Threshold	Not available
pH	Not available
Boiling Point	Not applicable
Melting /Freezing Point	Not applicable
Freezing Point	Not applicable
Flash Point	>93°C
Flammability	Not applicable
Upper and Lower Explosive Limits	Not applicable
Vapour Pressure	Not available

Vapour Density	Not applicable
Specific Gravity/Density	1.05 – 1.15g/mL at 20°C
Solubility in water	Not available
Partition Coefficient:	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not applicable
Kinematic Viscosity	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Stability of the substance:	Stable under normal conditions of storage and use
Conditions to avoid:	No specific conditions to avoid
Material to avoid:	Store only in the container supplied. Use the recommended delivery equipment.
Hazardous decomposition products:	None if stored and handled correctly

SECTION 11: TOXICOLOGICAL INFORMATION

Acute effects:	<u>Abamectin</u> LD50 (Oral-rats) = 10mg/kg LD50 (Dermal-rats) = 330mg/kg <u>Levamisole</u> LD50 Oral Mouse 205-285mg/kg LD50 Oral Rat 458-1095mg/kg LD50 Oral Rabbit 458mg/kg
Swallowed **Dermal** **Inhalation** **Eye** **Skin**	Harmful if swallowed. Not applicable. Not applicable. Causes serious eye damage. May cause an allergic skin reaction.
Chronic and long-term effects:	
Reproductive **Systemic**	Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children. Rats given 0.40 mg/kg/day of abamectin had increased stillbirths, decreased pup viability, decreased lactation, and decreased pup weights. These data suggest that abamectin

	may have the potential to cause reproductive effects at high enough doses. (Source: EXTOXNET)
Carcinogenicity	Not applicable.
Aspiration	Not applicable.
Germ Cell Mutagenicity	Suspected of causing genetic defects.
STOT/RE	May cause damage to organs through prolonged or repeated exposure. In a 1-year study with dogs given oral doses of abamectin, dogs at the 0.5 and 1 mg/kg/day doses exhibited pupil dilation, weight loss, lethargy, tremors, and recumbency. Similar results were seen in a 2-year study with rats fed 0.75, 1.5, or 2 mg/kg/day. Rats at all the dosage levels exhibited body weight gains significantly higher than the controls. A few individuals in the high dose group exhibited tremors. (Source: EXTOXNET

SECTION 12: ENVIRONMENTAL INFORMATION

Very toxic to aquatic life with long lasting effects
Hazardous to soil organisms
Hazardous to terrestrial vertebrates
Hazardous to terrestrial invertebrates

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available
Ecotoxicity effects:	Abamectin is highly toxic to fish and extremely toxic to aquatic invertebrates. Very toxic to terrestrial invertebrates LC50 (96-hour) is 0.003 mg/L in rainbow trout, 0.0096 mg/L in bluegill sunfish, 0.015 mg/L in sheepshead minnows, 0.024 mg/L in channel catfish, and 0.042 mg/L in carp. The 48-hour LC50 in Daphnia magna (a small freshwater crustacean) is 0.003 mg/L. Levamisole is potentially toxic to terrestrial vertebrates

Do not allow to enter waterways or sewerage.

SECTION 13: DISPOSAL CONSIDERATIONS

Product disposal:	Preferably dispose of product by use in accordance with label directions. Otherwise dispose of product at an approved landfill, or other approved facility in accordance with local, regional and national regulations. Avoid contamination of any water supply with product.
Container disposal:	Dispose of empty containers by wrapping in paper and putting in garbage for disposal at an approved landfill, or other approved facility in accordance with local, regional and national regulations. Avoid contamination of any water supply with empty container.

SECTION 14: TRANSPORT INFORMATION

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2020

UN No.:	3082
Class:	9
Packing Group:	III
Hazchem Code:	3Z
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Abamectin)
Limited Quantities Statement: If the product's individual container is below 5L, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG	

SECTION 15: REGULATORY INFORMATION

Regulatory status:	**Veterinary Medicines (Non-Dispersive Open System Application) – HSR100759**

HSW (HS) Regulations 2017	**Trigger Quantity**
Signage Trigger Quantities (Schedule 3)	100L
Emergency Response Plan (Schedule 5)	100L
Secondary Containment (Schedule 5)	100L
Tracking (Schedule 26)	Not required
Certified Handlers	Not required
Location Certificate	Not required
HSNO Additional Controls (Restrictions of use)	
	The substance shall only be used as a veterinary medicine.
ACVM Act and Regulations	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	A010817

SECTION 16: OTHER INFORMATION

Glossary

CAT Category
EC50 Median effective concentration.
EEL Environmental Exposure Limit.
EPA Environmental Protection Authority
HSNO Hazardous Substances and New Organisms.
HSW Health and Safety at Work.
LC50 Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50 Lethal dose to kill 50% of test animals/organisms.
LEL Lower explosive level.
OSHA American Occupational Safety and Health Administration.
TEL Tolerable Exposure Limit.
TLV Threshold Limit Value-an exposure limit set by responsible authority.
UEL Upper Explosive Level
WES Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices FEB 2025 15th edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

This Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. ALLEVA Animal Health Limited makes no warranty with respect hereto and disclaims all liability from reliance thereon.

Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

PLEASE READ ALL LABELS CAREFULLY BEFORE USING PRODUCT.

Issued Date: 27 February 2025 Review Date: 27 February 2030